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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,206	09/30/2003	Dirk Hillebrand	32860-000643/US	9614

30596 7590 08/24/2005

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EXAMINER

HEINRICH, SAMUEL M

ART UNIT PAPER NUMBER

1725

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,206	<b>Applicant(s)</b> HILLEBRAND ET AL.	
	<b>Examiner</b> Samuel M. Heinrich	<b>Art Unit</b> 1725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/18/2003</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 5 and 6, "the individual drill position" does not have clear antecedent basis. Is this the initial centering or the initial drilling of the circumference?

Claim 4, "hystereses" is not described in the Detailed Description. Some description of claimed subject matter must be contained in the Detailed Description.

Claim 5, line 7, parenthetical limitations fail to particularly point out and distinctly claim the subject matter. Claim 5, line 10, "or-bits" is misspelled.

The dependent claims contain the unclear language of base claims 1 and 5.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,407,363 to Dunskey et al in view of USPN 6,229,114 to Andrews et al. Substantial limitations are shown by Dunskey et al (Figure 2) comprising beam directing reflectors 50, 52, and 54, flexible mirror 56 and turn mirror 58, and comprising fast positioner 60 comprising elements such as galvanometer mirrors. Figure 21 of Dunskey et al shows a hole drilling sequence. Dunskey et al do not describe the x and y scanning mirrors. Andrews et al show (Figure 8) the use of x and y scanning mirrors. Substitution of x and y scanning mirrors in place of the flexible and turn mirrors

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described by Dunskey et al would have been obvious at the time applicant's invention was made to a person of ordinary skill in the art because both types of mirrors provide positioning control during laser beam operation. The use of multiple movable mirrors in place of one mirror for increasing the movement speed would have been obvious at the time applicant's invention was made to a person of ordinary skill in the art because the multiple reflections reduce the range of motion of a single mirror required.

Claims 4, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,407,363 to Dunskey et al in view of USPN 6,229,114 to Andrews et al as applied to claim 1 above, and further in view of JP404352120A. Hystereses control is well known as described, for example, by JP404352121A and the use thereof in the control of Dunskey et al in view of Andrews et al would have been obvious at the time applicant's invention was made to a person of ordinary skill in the art because the mirror control is improved.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,407,363 to Dunskey et al in view of USPN 6,229,114 to Andrews et al as applied to claim 5 above, and further in view of JP09101474A. Piezoelectric control of laser is well known as described by JP09101474A and the use thereof in Dunskey et al in view of Andrews et al would have been obvious at the time applicant's invention was made to a person of ordinary skill in the art because the control is fast and compact.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art pertains to beam control.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Samuel M. Heinrich* 8-22-05

Samuel M Heinrich  
Primary Examiner  
Art Unit 1725

SMH